

SANDRA OZOLA**STUDENT-CENTRED LEARNING: A DREAM OR REALITY****Annotation**

Instructional approach of teaching-learning process refers to educational practices which are teacher-centred, non-interactive and prescribed. A student-centred learning process where teachers and students communicate optimally is dependent on using constructivist approach with its strategies, tools and practices. It is process-orientated, interactive and responsive to students interests.

Introduction

Learning is an intangible production of a tangible product and like all production processes, it requires someone who knows how to manage the process in order to achieve the desired result.

It really has been long enough - 12 years in the new century and still one can see the 25-30 students in traditional classrooms with students sitting in rows at the desks listening (or pretending to listen) to teachers and doing monotonous activities. Classrooms have improved, they have better desks and chairs that are more comfortable, the introduction of technology like data projectors, audio and visual systems, interactive white boards, but essentially they are designed for the same traditional mode of teaching because they are:

- teacher-centred,
- lacking flexibility,
- having limited support for technology,
- 'fixed' in design so difficult to be adapted for any other purposes,
- individual focused rather than group focused.

At the same time face-to-face and traditional distance approaches can no longer meet the needs of education and learners. Flexible learning challenges the necessity of open interactions among teachers and learners in terms of place, time and media – the goals being to increase learners' control over where, when and how they learn. Learners nowadays are:

- technology literate,
- flexible,
- multitasking,
- interactive and networked,
- reflective,
- creative and adaptive,
- anywhere anytime learners.

From Instructional to Constructivist Approach of Learning

These changes are the signs that there should be a shift from what has been labelled as the 'instructional paradigm' towards the 'learning paradigm', from a school being an institution that provides instruction to students to an institution that produces learning in students (Barr & Tagg, 1995). As pointed out by Chan & Elliot (2004) there are two main opposite conceptions in teaching and learning (traditional

and constructivist). Therefore it is important to understand in what way knowledge develops and who is the actor.

Traditional conception utilizes teacher-centred teaching strategies and sees the teacher as the source of knowledge and the student as the passive receiver of knowledge.

Constructivism is a view of learning that knowledge is not a thing that can be simply given by a teacher at the front of the classroom to students at their desks. Rather, knowledge is constructed by learners through an active, mental process of development and learners are the builders and creators of meaning and knowledge. The constructivist conception uses student-centred teaching strategies because this type of learning will help students develop critical thinking and collaboration skills and learning takes place in environments where students are able to participate actively (Chan & Elliot, 2004; Cheng, Chan, Tang & Cheng, 2009). Constructivism refers to a collection of educational practices that are student-focused, meaning-based, process-orientated, interactive, and responsive to student personal interests and needs (Goodman, 1998; Honebein, 1996).

Constructivist teaching is based on the belief that learning occurs as learners are actively involved in a process of meaning and knowledge construction as opposed to passively receiving information.

In other words the shift is from traditional or instructional teaching to constructivist or learner-centred learning.

For the constructivists, learning happens when students are engaged in a meaningful discussion in their learning surroundings (Douglas, 2006). Constructivists explain that learners remember things with the visual meanings in their minds not just facts. To the constructivists education is a method of discovery. Information is retrieved when a learner makes a personal discovery (Bruner, 1996). In constructivist classrooms teachers promote diverse thinking and problem solving skills as a means of useful learning as well as they encourage learners to learn cooperatively and think creatively to achieve better results (Katsuko, 2006).

Fosnot (1989) defines constructivist learning by reference to four principles:

- 1) learning, in an important way, depends on what students already know,
- 2) new ideas occur as students adapt and change old ideas,
- 3) learning involves inventing ideas rather than mechanically accumulating facts,
- 4) meaningful learning occurs through rethinking old ideas and coming to new conclusions about new ideas which conflict with old ones.

Constructivist ideas can be traced in Piaget works (1977) as he asserts that learning occurs by an active construction of meaning, rather than passive recipience. He explains that when students, as learners, encounter an experience or a situation that conflicts with their current way of thinking, a state of disequilibrium or imbalance is created.

In this new scheme a school and every teacher become designers of learning environment and have a role to play and a contribution to make in maintaining a learner-centred process. Today's students are changing far more rapidly than schools that recruit them. Relinquishing control is key to creating a learning-centred environment and it requires 'trust in students' (Bain, 2004). Theorists like Dewey (1916) and Piaget (1977) focused on students being responsible for their learning.

It is a process approach to learning that allows to see this process as a whole and it is ensured by constructivist strategies and activities. In a process approach, Langer and Applebee (1993, 5) explains that 'rather than emphasizing characteristics of the final products, process-orientated instruction focuses on problem-solving strategies that students need to learn in order to generate those products'.

Bloom's Taxonomy as a Learning Process

Bloom's (1956) revised taxonomy done by Anderson and Krathwohl (2001) helps to see more clearly the complexity of the learning process that goes from lower order thinking skills (LOTS) to higher order thinking skills (HOTS):

- **Remembering** – recognising, listing, describing, identifying, retrieving, naming, locating, finding.
- **Understanding** – interpreting, inferring, paraphrasing, classifying, comparing, explaining, exemplifying.
- **Applying** – implementing, carrying out, using, executing.
- **Analysing** – comparing, organising, deconstructing, attributing, outlining, finding, structuring, integrating.
- **Evaluating** – checking, hypothesising, critiquing, experimenting, judging, testing, detecting, monitoring.
- **Creating** – designing, constructing, planning, producing, inventing, devising, making.

Though, on the one hand, these can be considered as separate stages in learning but, on the other hand, it is important to perceive it as mutually linked process:

- before students can **understand** a concept they have to **remember** it,
- before students can **apply** the concept they must **understand** it,
- before students **analyse** it they must be able to **apply** it,
- before students can **evaluate** its impact they must have **analysed** it,
- before students can create they must have **remembered, understood, applied, analysed** and **evaluated**.

Learning Principles

Although learning is the activity of an individual at the same time learning is a social activity - learning is intimately associated with students' connection with other human beings, their teachers, peers, family as well as casual acquaintances. Learning is mostly a social process in which a child grows in the intellectual life that surrounds him/her (Clements & Battista, 1990).

According to the research carried out by the professionals of Eberly Center for Teaching Excellence, Carnegie Mellon University the following learning principles can be distinguished:

1. Students' prior knowledge helps learning.
If students' prior knowledge is robust and accurate and activated at the appropriate time, it provides a strong foundation for building new knowledge (Dweck, 2002).
2. The way how students organize their knowledge influences how they learn and apply what they know.

Students naturally make connections between pieces of knowledge. When those connections form knowledge structures that are meaningfully organized, students are better able to retrieve and apply their knowledge effectively and efficiently (Anderson, Conrad, Corbett, 1989).

3. Students' motivation determines, directs, and sustains what they do to learn. Renninger (2004) explains that when students find positive value in a learning goal or activity, expect to successfully achieve a desired learning outcome, and perceive support from their environment, they are likely to be strongly motivated to learn.
4. To develop mastery, students must acquire component skills, practice integrating them, and know when to apply what they have learned. They have to learn when and how to apply the skills and knowledge they learn.
5. Goal-directed practice and targeted feedback enhances the quality of students' learning. Learning and performance are best facilitated when students engage in practice that focuses on a specific goal or criterion, targets an appropriate level of challenge. Wiggins (1998) says that practice must be coupled with feedback that provides information to help students progress in making progress.
6. Students' current level of development interacts with the social, emotional, and intellectual climate of learning process. Students are not only intellectual but also social and emotional beings and they develop the full range of intellectual, social, and emotional skills.

Conclusion

There is an obvious need to ensure this learner-centred or constructivist approach in teaching–learning process on all levels of education. Though constructivist approach has comparatively long history still it is not enough embedded in the learning process. Thus further research is necessary to find out what are the skills of teachers allowing them to implement constructivist approach and what changes there must be in students to take over the responsibility and power of their own learning.

Acknowledgment

This work has been supported by the European Social Fund within the project «Support for Doctoral Studies at University of Latvia».

References

- Anderson, J. R., Conrad, F. G., Corbett, A. T. (1989). Skill acquisition and the LISP tutor. *Cognitive Science*, 13(4), 467-505.
- Anderson, L. W. & Krathwohl, D. R. (eds.) (2001). *A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives*. New York: Longman.
- Applebee, A. N. (1993). *Literature in the secondary school: Studies of curriculum and instruction in the United States*. Urbana, IL: National Council of Teachers of English.

- Barr, R. B. & Tagg, J. (1995). From teaching to learning - a paradigm for undergraduate education. *Change Magazine*, 27 (6): 12-25.
- Bain, K. (2004). *What the best college teachers do*. Cambridge, MA: Harvard UP.
- Bloom, B. S. (1956). *Taxonomy of Educational Objectives, the classification of educational goals – Handbook I: Cognitive Domain*. New York: McKay.
- Chan, K. W. & Elliott, R. G. (2004). Relational analysis of personal epistemology and conceptions about teaching and learning. *Teaching and Teacher Education*, 20, 817-831.
- Cheng, M. M. H., Chan, K. W., Tang, S. Y. F. & Cheng, A. Y. N. (2009). Pre-service teacher education student' epistemological beliefs and their conceptions of teaching. *Teaching and Teacher Education*, 25, 319-322.
- Clements, D. H. & Battista, M. T. (1990). Constructivist learning and teaching. *Arithmetic Teacher*, 38 (1), 34-35.
- Dewey, J. (1916). *Democracy and education*. New York: The MacMillan Company.
- Douglas, A. G. (2006). The Emergence Model: An alternative pedagogy for facilitating self-reflection and theoretical fit in counseling students. *Counselor Education and Supervision*, 44 (3): 201.
- Dweck, C. S. (2002). Beliefs that make smart people dumb. In R. J. Sternberg (Ed.), *Why smart people can be so stupid* (pp. 24-41). New Haven, CT: Yale University Press.
- Eberly Center for Teaching Excellence, Carnegie Mellon University – online link: <http://www.cmu.edu/teaching/principles/index.html>
- Fosnot, C. T. (1989). *Enquiring teachers, enquiring learners: A constructivist approach for teaching*. New York: Teachers College Press.
- Goodman, K. S. (1998). *In defense of good teaching: What teachers need to know about the reading wars*. Urbana, IL: National Council of Teachers of English.
- Hidi, S. & Renninger, K. A. (2004). Interest, a motivational variable that combines affective and cognitive functioning. In D. Y. Dai & R. J. Sternberg (Eds.), *Motivation, emotion, and cognition: Integrative perspectives on intellectual functioning and development* (pp. 89-115). Mahwah, NJ: Erlbaum.
- Honebein, P. (1996). Seven goals for the design of constructivist learning environments. In B. Wilson (ed.), *Constructivist learning environments* (pp. 17-24). Englewood Cliffs, NJ: Educational Technology Publications.
- Katsuko, H. (2006). Review of the literature on information skills instruction. *Education*, 126 (3): 518.
- Piaget, J. (1977). *The development of thought: Equilibration of cognitive structures*. (A. Rosin, Trans). New York: The Viking Press.
- Wiggins, G. (1998). *Educative Assessment: Designing Assessments to Inform and Improve Student Performance*. Jossey-Bass: San Francisco.

Sandra Ozola
MA Education, PhD student
University of Latvia
ozola.sandra@gmail.com